

## **REMARKS**

The Examiner's Office Action mailed September 14, 2007, which rejected all pending claims, has been reviewed. Reconsideration in view of the foregoing Amendments and Remarks is respectfully requested. Moreover, Applicants have reviewed the Office Action of September 14, 2007, and submit that the Amendments and Remarks are responsive to all points raised therein. Applicants believe that currently pending claims 2-7 are now in form for allowance.

### Status of Claims

Claims 2-7 are pending in the application. Support for new claim 7 can be found, for example, at Examples 1-4 of the specification. No new matter has been added.

### Rejection of Claims 2-6 under 35 USC § 103(a)

Reconsideration is requested of the rejection of claims 2-6 under §103(a) as being unpatentable over Mencke et al. (US Patent No. 5,712,295, hereinafter "US Mencke") in view of Mencke et al. (WO 96/38165 or corresponding US Patent No. 6,159,932, hereinafter "WO Mencke").

The claimed invention is directed to a composition that is effective for controlling both endoparasites and ectoparasites on animals. Independent claim 1 recites a composition that includes a first active ingredient selected from the group consisting of avermectin, 22, 23-dihydroavermectin B<sub>1</sub>, and milbemycin, and a second active ingredient selected from the group consisting of agonists and antagonists of the nicotinic acetylcholine receptors of insects.

The subject matter of a claim is prima facie obvious in view of particular references if the Patent Office can demonstrate that (1) the references, alone or together, teach every element of the claims, (2) there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to combine the references, and (3) there is some reasonable expectation of success.

Recently, the Supreme Court emphasized that the standard for obviousness is not rigid and should not be applied as such. *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007). Instead, if the common sense of those skilled in the art could demonstrate why some combinations would have been obvious where others would not, then a claim can be found obvious even without an explicit teaching, suggestion, or motivation. As the Court stated in *KSR*, "it will be necessary for [the Office] to look at interrelated teachings of multiple [prior art references]; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by [one of] ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the [patent application]." *Id.* at 1740–41.

As the Examiner correctly stated, US Mencke teaches a method of combating endoparasites using agonists and antagonists of the nicotinic acetylcholine receptors of insects. US Mencke does not teach or suggest a method of combating both endoparasites and ectoparasites. In addition, US Mencke does not teach or suggest macrocyclic lactones, in particular avermectins, 22, 23-dihydroavermectins B<sub>1</sub>, and milbemycins, at all.

WO Mencke teaches the combination of avermectins, 22, 23-dihydroavermectins B<sub>1</sub>, and milbemycins with cyclic depsipeptides as an endoparasitocidal composition. WO Mencke does not teach a method of combating both endoparasites and ectoparasites. In addition, WO Mencke does not teach or suggest agonists and antagonists of the nicotinic acetylcholine receptors of insects at all.

The Examiner states that it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose in order to form a third composition to be used for the very same purpose. Applicants respectfully disagree. The composition of the present invention is not used for the same purposes as the compositions of US Mencke and WO Mencke. In particular, the composition of the present invention is directed to combating both endoparasites and ectoparasites not just

endoparasites as in the cited references. In fact, neither US Mencke nor WO Mencke teach or disclose the use of their respective compositions for combating ectoparasites. Neither references teach or disclose combating ectoparasites at all. As neither reference discloses combating ectoparasites, one skilled in the art would not have been motivated to combine two references that combat endoparasites to control both endoparasites and ectoparasites.

In addition, even if a person skilled in the art would have been motivated to combine the cited references, there is no reasonable expectation of success without undue experimentation or hindsight. As stated before, since neither reference discloses combating ectoparasites, even one skilled in the art would have had to perform substantial experimentation to arrive at the composition of the present invention and its properties. As can be seen from Example A of the specification, a composition of the present invention that includes imidacloprid and ivermectin was placed on the shoulder of a dog infested with 200 fleas (ectoparasites). After application, the animal was free of fleas. Example B of the specification also demonstrates control of ectoparasites using the composition of the present invention. Examples C and D provide a comparison of the endoparasitocidal activity of imidacloprid by itself, ivermectin by itself, and the combination of imidacloprid and ivermectin at different dosage rates. As can be seen from Examples C and D the combination of imidacloprid and ivermectin provides a reduction in nematodes not found when each compound is used individually. Finally, Example E of the specification demonstrates the endoparasitocidal and ectoparasitocidal activity of the composition of the present invention that includes imidacloprid and ivermectin at different dosage rates. All dosages proved to control both the insecticidal activity (enctoparasites) and the endoparasitocidal activity in the dogs.

Applicants have also attached additional data to show the in vitro activity of compositions of the present invention in controlling *Lucilia cuprina* larvae (ectoparasites) and a Declaration by Dr. Andreas Turberg explaining the data. As detailed in the Declaration and additional data two compositions of the present invention were tested, a combination of imidacloprid and moxidectin and

a combination of thiametoxam and eprinomectin. Dr. Turberg observed that each combination showed synergistic and improved efficacy over the application of each compound individually. This can be seen from Table 1 and Figure 1 for the combination of imidacloprid and moxidectin and Table 3 and Figure 2 for the combination of eprinomectin and thiametoxam.

For all the reasons stated above, US Mencke in combination with WO Mencke do not render claim 2 obvious. Claims 3-7 each depend directly or indirectly from claim 2, and as such are patentable over US Mencke and WO Mencke.

### Conclusion

In view of the above, Applicants respectfully submit that the pending claims are novel and not obvious over the cited references and request withdrawal of all rejections and allowance of the claims.

The Commissioner is hereby authorized to charge any fee deficiency or credit any overpayment in connection with this amendment to Deposit Account No. 50-4260.

Respectfully submitted,  
/JESSICA MONACHELLO/  
Jessica Monachello  
Reg. No. 58,015  
BAYER HEALTHCARE LLC  
P.O. Box 390  
Shawnee Mission, KS 66201  
Tel: 913-268-2038  
Fax: 913-268-2889